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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,806	07/03/2001	Koki Kanda	0941.65658	5709

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,806

Applicant(s)

KANDA ET AL.

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,22 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,22,27 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9-10-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on November 22, 2004 has been entered.

Continuation

The specification as amended originally on July 3, 2001, should be amended further to reflect the updated status of Patent Application Serial Number 08/834,436 (now issued as U.S. Patent No. 6,282,061).

Election/Restrictions

Claims 19, 22 and 27-30 are currently pending.

Claims 1-18, 20, 21, 23-26 have been voluntarily cancelled by the Applicants.

The Applicants have elected Species I (corresponding to FIGS. 3A and 3B) *without* traverse in Paper No. 15 (filed April 12, 2004). The Applicants contend that pending claims 19, 22 and 27 read thereon in the Response filed by the Applicant on April 12, 2004.

Non-elected claims 28 and 29 were thus withdrawn from consideration as being drawn to non-elected Species.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 22 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to amended claim 19 (lines 8-10), the phrase “and a second transverse recess generally perpendicular to said first lateral recess which extends from said thin-film element part towards said distal end” is ambiguous and possibly misdescriptive. More concretely, it is unclear as to whether the phrase “which extends from said thin-film element part towards said distal end” recited in lines 9-10, is describing the first lateral recess (and is just a replication of language from lines 7 and 8 of claim 19), or whether the phrase is intended to modify and describe the second transverse recess as also “extend[ing] from said thin-film element part towards said distal end lateral recess.” The claim is completely ambiguous in this regard.

If the claim is intended to imply that the second recess also extends from said thin-film element part towards said distal end, then it is noted that such a description is misdescriptive with respect to the Applicants’ disclosure. More concretely, looking at FIGS. 3A and 3B of the Applicants’ drawings, the second recess 43a commences in a direction toward the distal end, but never actually extends “from” the thin-film element part (35). As is clearly seen in FIG. 3B, there exists a space “s” of the protective layer(36) which spaces the recess a distance “s” from the thin-film element part backmost part (41). Thus, it cannot be said that the second recess

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(43a) extends from said thin-film element part towards said distal end as set forth in claim 19, assuming that is what the Applicants' intended to claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuzaki (JP 03-132910 A).

As per claim 19, assuming that the intended scope of claim 19 is to be interpreted wherein the phrase "which extends from said thin-film element part towards said distal end" is describing the first lateral recess (and is just a replication of language from lines 7 and 8 of claim 19), Matsuzaki (JP 03-132910 A) discloses a magnetic head comprising: a slider (1) having a rail (11,12) with a top surface; a thin-film element part (2) to write and read information, formed on an end of said rail top surface of said slider (1); and a protective film (3) formed on said thin-film element part (2) and defining a distal end of the rail (e.g., FIG. 5) whereby air exits said slider (1) at said distal end, said protective film (3) having a first lateral recess (13(16)) which extends from said thin-film element part (2) towards said distal end along the a direction as seen in FIG. 5), and a second transverse recess generally perpendicular to said first lateral recess (13(16)) which extends from said thin-film element part (2) towards said distal end, said second recess (111,112/121,122) being lower than said rail top surface (123) (FIGS. 2 or 6) and having a width

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defined by a width of said rail (11/12). That is, the second recess (111,112/121,122) extends the entire length of the rail, yet also has a width component and radius of curvature (R) as seen in FIG. 2, such curvature having a radius which is indeed perpendicular to the direction (a). Additionally, in the embodiment of FIG. 6, the square indentation is provide along a direction perpendicular to the direction (a) of FIG. 5.

Additionally, as per claim 27, the second recess (111,112/121,122) has a top surface substantially parallel to said rail top surface - see FIG. 6.

Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Matsuzaki (JP 03-132910 A).

As per claim 30, Matsuzaki (US 5,200,869) discloses a magnetic head comprising: a single rail slider (1) having a rail (e.g., single rail 101) with a top surface (surface of single rail (101)), a thin-film element part (2) to write and read information, formed on an end of said rail top surface (surface of single rail (101)) of said slider (1), and a protective film (28) formed on said thin-film element part (2) and defining a distal end (the very end of rail, which lies within the end plane (103)) of the rail (e.g., single rail 101) whereby air exits said slider (1) at said distal end, said protective film (28) having a recess (missing square corner at layer (28) and the ABS) which extends from said thin-film element part (2) towards said distal end, said recess being lower than said rail top surface and having a width equal to a width of said rail. See the enclosed marked-up copy of Figures 2 and 3 of Matsuzaki (US 5,200,869) appended herewith. This interpretation is consistent, e.g., with the embodiment depicted in FIGS. 16A and 16 of Applicants' instant disclosure, except that Matsuzaki (US 5,200,869) uses a single rail as

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opposed to a two-rail slider.

It is noted that this interpretation is being made with respect to the Applicants' "recess which extends *from* said thin-film element part." That is, the Applicants' specification fails to disclose wherein the recess actually commences from the thin-film element, but that the recess is "offset" from the thin-film element by a spacing "s." Until the Applicants' clarify what may appears to be a misdescription, as articulated in the rejection under 35 USC 112 2nd, *supra*, the Examiner maintains that the interpretation of Matsuzaki (US 5,200,869) as reading on claim 30 is reasonable, even though the corner recess is also somewhat offset from the thin film element by a spacing "S."

More concretely, as shown in the enclosed marked-up copy of Figures 2 and 3 of Matsuzaki (US 5,200,869) appended herewith, the recess is considered to be the portion of (28) which is missing from the protective portion (28) at the intersection of surfaces (101) and the end surface of the distal end of protective layer (28). The missing corner of surface (28) at this intersection is considered to be recessed away from the right-angled square corner, as is often done in the prior art to minimize chipping at the trailing end air bearing surface of the slider. Note that the non-ABS surface forms a square, right-angled corners.

Alternatively, as indicated in the enclosed marked-up copy of Figures 2 and 3 of Matsuzaki (US 5,200,869) appended herewith, the recess could be broadly considered that portion of (28) into which upper pole (23) of the thin-film element protrudes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

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obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (JP 03-132910 A).

See the discussion of Matsuzaki (JP 03-132910 A), *supra*.

As per claim 22, Matsuzaki (JP 03-132910 A) shows a slider for use in a conventional magnetic disk apparatus, but does not explicitly depict such a conventional magnetic disk apparatus, including conventional elements such as a head supporting part for carrying the magnetic head to enable said head to float over a recording medium; an arm part on which said head supporting part is fitted; and a driving part for moving said arm part over said recording medium.

Official notice is taken that such conventional magnetic disk apparatuses which the conventional component parts recited in claim 22 are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the magnetic head slider of Matsuzaki (JP 03-132910 A) within a conventional magnetic disk apparatus set forth in claim 22.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the magnetic head slider of Matsuzaki (JP 03-132910 A) within a conventional magnetic disk apparatus set forth in claim 22 in order to provide the magnetic head slider of Matsuzaki (JP

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03-132910 A) within its intended operating environment, thereby providing the self-evident advantages of the slider of Matsuzaki (JP 03-132910 A) (“floating quantity can be reduced”) within a conventional magnetic disk apparatus.

Response to Arguments

Applicants’ arguments filed November 22, 2004 have been considered, but are deemed nonpersuasive.

The Applicants allege that Matsuzaki (JP 03-132910 A) fails to disclose the claimed recess, as now set forth in the amended claims, since “[w]hile, Matsuzaki shows the stepped portions 111, 112 or 121, 122 as lateral stepped portions, Matsuzaki fails to teach (or suggest) a second transverse recess in combination with a lateral recess.” See Applicants’ response filed November 22, 2004, page number 5.

As set forth in the rejection, *supra*, the Examiner maintains that as per claim 19, assuming that the intended scope of claim 19 is to be interpreted wherein the phrase “which extends from said thin-film element part towards said distal end” is describing the first lateral recess (and is just a replication of language from lines 7 and 8 of claim 19), Matsuzaki (JP 03-132910 A) does indeed disclose a second transverse recess generally perpendicular to said first lateral recess (13(16)) which extends from said thin-film element part (2) towards said distal end, said second recess (111,112/121,122) being lower than said rail top surface (123) (FIGS. 2 or 6) and having a width defined by a width of said rail (11/12). That is, the second recess (111,112/121,122) extends the entire length of the rail, yet also has a width component and radius of curvature (R) as seen in FIG. 2, such curvature having a radius which is indeed

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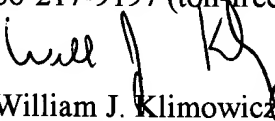
perpendicular to the direction (a). Additionally, in the embodiment of FIG. 6, the square indentation is provide along a direction perpendicular to the direction (a) of FIG. 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

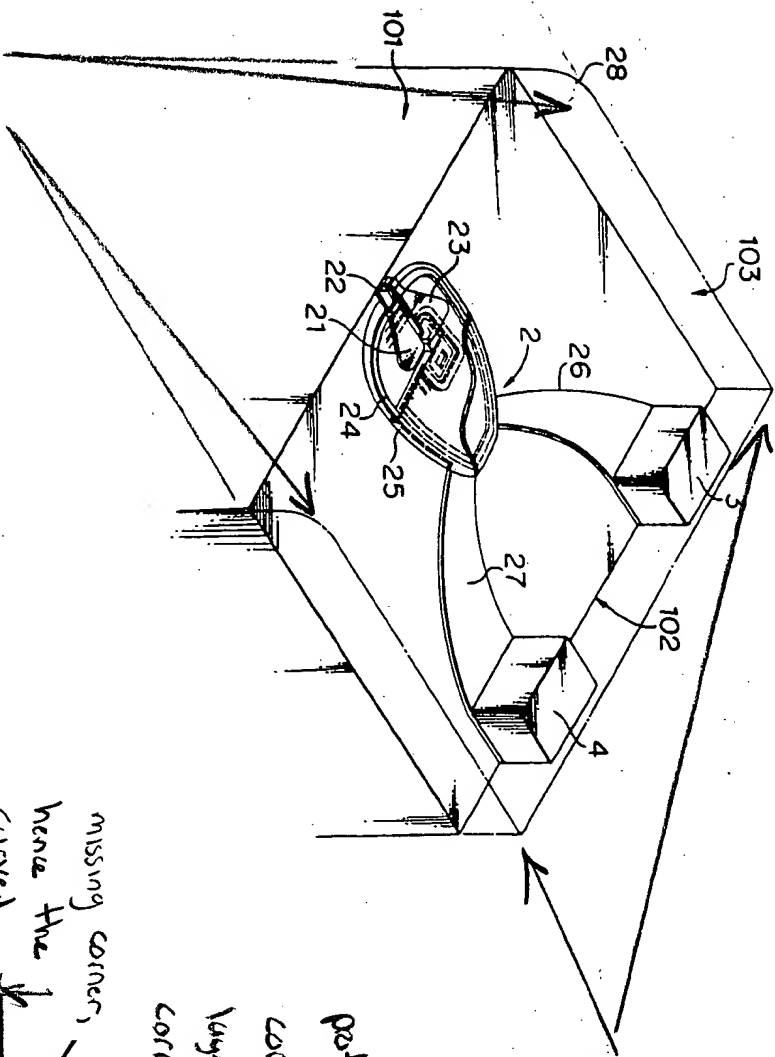
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK

FIGURE 2

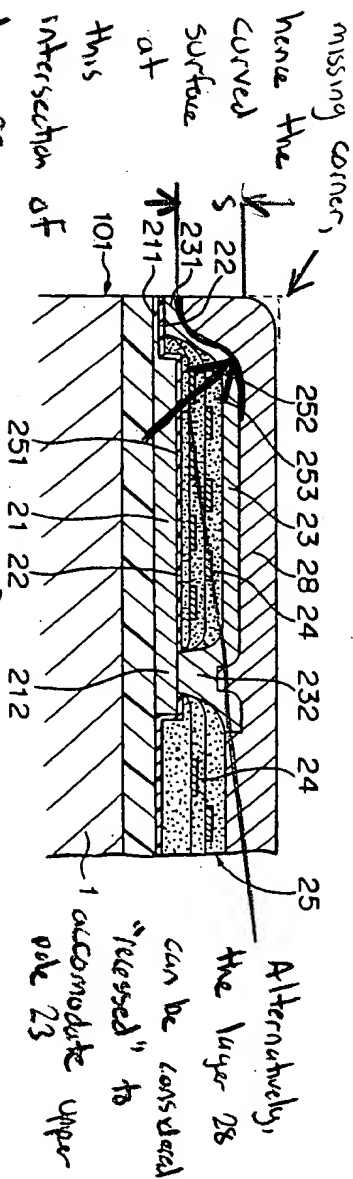


rounded corner "recessed" into 28
is formed the entire width
of slider rail 101

non-recessed corners of protective layer 28

protective layer 28 is recessed away from
corner intersection of the distal end of protective
layer 28 and surface 101 forming a rounded
corner

FIGURE 3



missing corner,
hence the
curved
surface
at
this
intersection of
layer 28 is recessed away from a square corner,
unlike the non-recessed top corners.

Alternatively,
the layer 28
can be considered
"recessed" to
accommodate upper
pole 23